

## 5.1 Sales Tax

10/28/14

**What is sales tax and for what are the monies used?**

Sales tax is *added cost on most items that you buy.*

Every state except Alaska, Delaware, Montana, New Hampshire, and Oregon assesses a general sales tax.

Sales taxes are used *for roads/infrastructure  
pay State employees, state parks, schools,  
prisons, gov't buildings, healthcare,  
CCAP/TANF + other social support  
programs, pensions*

## 5.1 Sales Tax

10/28/14

Progressive taxes — the people with more money  
are taxed at a higher rate (federal income tax)

Regressive taxes — the people w/ less money  
pay more of their income in taxes  
(Sales tax)

IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.1 Sales Tax

10/28/14

### Nontaxable Items (Tax Exempt)

Generally:

- unprepared food
- baby food
- bread
- medicine (prescription and over-the-counter)

### Taxable Items

All others, such as:

- ready-to-eat food (for example, cookies, chips, and frozen meals)
- appliances
- electronics
- furniture

IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive.



## 5.1 Sales Tax

10/28/14

Estimate sales tax

1. First, add up the total of the taxable items.
2. Then, move the decimal left two places to get one percent of that price.
3. Finally, multiply that one percent by whatever number you need to arrive at the state sales tax percentage.

Colorado's state sales tax is 2.9%. What is the approximate sales tax on a purchase of \$129.50? How much is the total purchase cost? How much would this purchase cost in Montana?

$$\$1.30 \times 2.9 \approx \$3.77$$

$$\begin{array}{r} +129.50 \\ \$133.27 \end{array} \quad \text{CO} \quad \text{MT } \$129.50$$

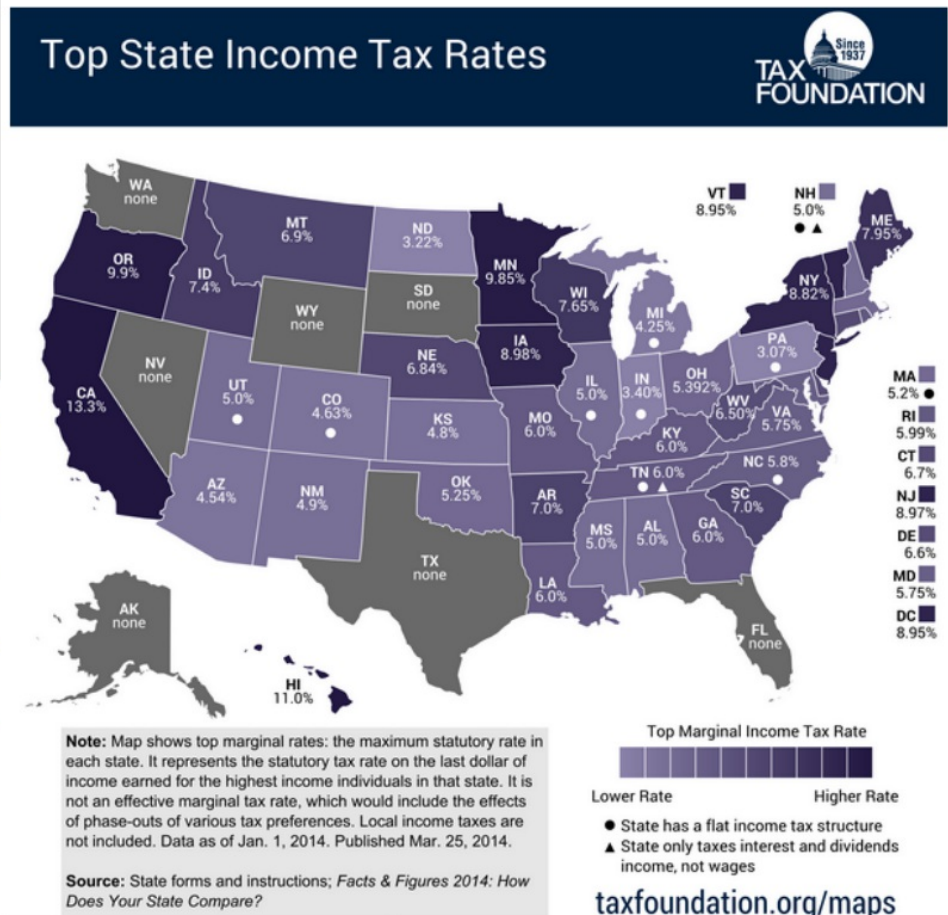
IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive.

## 5.1 Sales Tax

10/28/14



General State Sales Tax Range	States
0%	Alaska, Montana, New Hampshire, Oregon, Delaware
2% to 4%	Colorado, Alabama, Georgia, Hawaii, Louisiana, New York, South Dakota, Wyoming
4.225% to 6%	Missouri, North Carolina, Oklahoma, Maine, North Dakota, Virginia, West Virginia, Kansas, New Mexico, Nebraska, Ohio, Arizona, Utah, Arkansas, Connecticut, Florida, Idaho, Iowa, Kentucky, Maryland, Michigan, Pennsylvania, South Carolina, Vermont, Washington
6.25% to 8.25%	Illinois, Massachusetts, Texas, Wisconsin, Nevada, Minnesota, Indiana, Mississippi, New Jersey, Rhode Island, Tennessee, California



IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive.



## 5.1 Sales Tax

10/28/14

### Other income sources for states:

Whenever you go through a tollbooth in order to use a specific highway, bridge, or tunnel, you are paying the state government for the use.

States tax property owners according to the value of their property. Many property owners find it frustrating that they will always have to pay for their property, even when they own it!

Lotteries raise money for states because the state does not pay the winner everything that the lottery raises. States with low or no sales tax often raise more money from lotteries.

States impose "sin taxes" on entertainment or goods that are considered bad to do or consume, like alcohol, tobacco, or gambling. Many people feel that individuals consuming these products are imposing a cost on society, so they should pay a tax to offset that cost.

IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive.

Vocabulary: Appendix A.3 Key Terms

Practice: 5.1.2

Quiz 5.1.3

IWBAT consider various state sales taxes and practice calculating totals, taking exempt items into account and understand why sales tax is considered regressive.

## 5.2 Coupons, Rebates, and Sales

10/29/14

**Explain the difference between regressive taxes and progressive taxes in your own words.**



IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula:  $(\text{item price} - \text{deduction}) + \text{tax}$ . I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.2 Coupons, Rebates, and Sales

10/29/14

Coupons - *you have to have a token (paper or on your phone) to get the discount at the register.*



Because the retailer will eventually receive full price even when a coupon is used, sales tax must be paid on the full price of the item. In other words, the customer is expected to pay the tax on the full price of the item.

A box of cereal costs ~~\$3.59~~, but you have a coupon for 40¢ off. In Colorado, how much will that box of cereal cost you? *2.9%*

$$\$0.036 \times 2.9 = \$0.11$$

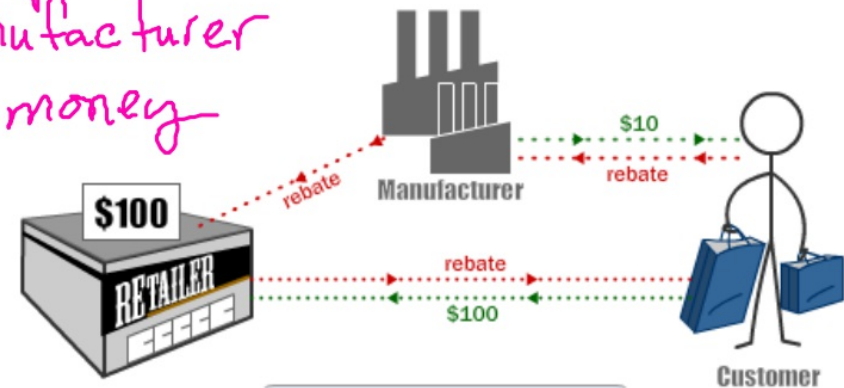
$$\begin{array}{r} 3.59 \\ + .40 \\ \hline \$3.99 \end{array}$$

IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula: (item price – deduction) + tax.

## 5.2 Coupons, Rebates, and Sales

10/29/14

Rebates - *You pay full price up front and send in a form with proof of purchase to the manufacturer to receive your money*



You are buying a printer for \$189.99 and there is a \$40 rebate from the manufacturer. In Colorado, what will the printer cost you?

$$\begin{array}{r} 189.99 \\ + 5.51 \\ \hline 195.50 \end{array} - 40 = \$155.50$$

IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula: (item price – deduction) + tax.



## 5.2 Coupons, Rebates, and Sales

10/29/14

Sales - % discount on the price of certain items in a store



you pay tax on the new price

An outfit for your child costs \$52.28, but is on sale for 25% off. In Colorado, how much will the outfit cost?

$$\begin{array}{r} \$52.28 \times .75 = \$39.21 \\ + 1.16 \text{ Tax} \\ \hline \$40.37 \end{array}$$

IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula: (item price – deduction) + tax.

## 5.2 Coupons, Rebates, and Sales

10/29/14

### **Coupon:**

Valid for certain items only

Can be used to promote a new item by encouraging customers to buy it

Might also be used to get rid of an older item that has been around too long

### **Rebate:**

Applies to a specific item

Good for a company, because a customer has to mail in documents to get the discount, and the customer may forget to do so

Could influence a customer when the customer is comparing similar products

IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula:  $(\text{item price} - \text{deduction}) + \text{tax}$ .



## 5.2 Coupons, Rebates, and Sales

10/29/14

### Sale:

Can be valid for a group of items, for example, all men's clothing

Good for clearing a store of older items

Effective in drawing customers into a store

Vocabulary: Appendix A.3 Key Terms

Practice: 5.2.2

Quiz 5.2.3

IWBAT understand the effect of a coupon, rebate, or sale and calculate the purchase total using a formula:  $(\text{item price} - \text{deduction}) + \text{tax}$ .

### 5.3 Marketing

10/30/14

**Calculate the purchase total using a formula: (item price – deduction) + tax.**

A toy car playset is regularly \$59.99. It is discounted \$10. (What percentage of the original price is the discount?) (What is the cost of the item when sold in Colorado?)

$$\begin{array}{r} \$59.99 \\ - 10.00 \\ \hline 49.99 \end{array}$$

$$49.99 \times 0.029 = 1.449$$

$$\begin{array}{r} \$49.99 \\ + 1.45 \\ \hline \$51.44 \end{array}$$

$$\begin{array}{r} \$10 \\ \hline \$59.99 \end{array} = 0.166$$

$\approx 0.17$   
17%

## 5.3 Marketing

10/30/14

### What is marketing?

When people try to sell their product  
or services.

## 5.3 Marketing

10/30/14

### What are the four Ps of marketing?

Product — what you sell

Placement — location

Promotion — advertising

Price — what you want to sell it for

### What are the four Ps of marketing?

Product      quality, demand  
                 cost of manufacturing  
                 target audience + market  
                 how it works

Placement ~ Location of product  
                 advertisement      store/office  
TV, radio, newspaper, Internet,  
flyers, sign, billboards,  
banners, business cards,  
Clothing, vehicles, bus stops



### What are the four Ps of marketing?

Promotion – booth, give aways  
social media, coupon / special  
advertising, loyalty cards

Price – cover costs & drive sales

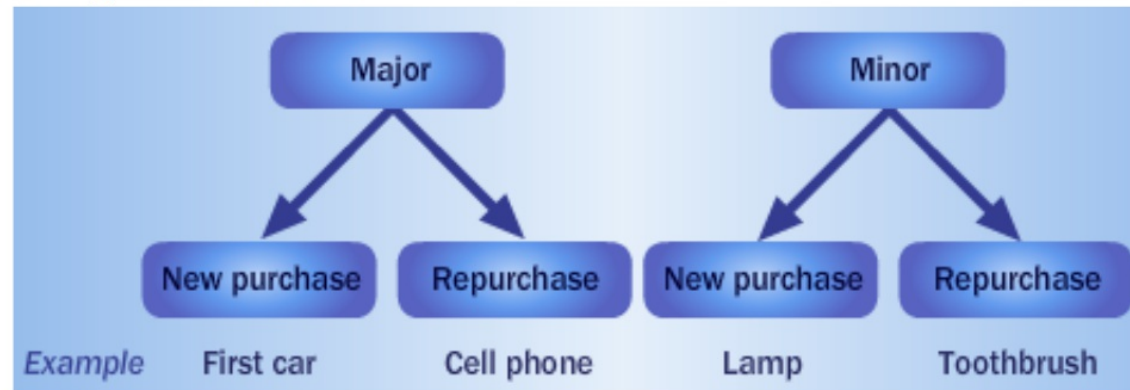
Value – what it's worth to the  
customer

IWBAT analyze the role that cultural, social, and emotional influences have on financial behavior and analyze the impact of marketing, advertising, and sales strategies and techniques on purchasing decisions (e.g., impulse buying, delayed payment). I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.3 Marketing

10/30/14

### Types of purchases



Major: *Cost more, more research*

Minor: *cost less, little to no research*

IWBAT analyze the role that cultural, social, and emotional influences have on financial behavior and analyze the impact of marketing, advertising, and sales strategies and techniques on purchasing decisions (e.g., impulse buying, delayed payment).

## 5.3 Marketing

10/30/14

Types of buying

Considered

*Think about it*

Impulse

*I saw it + bought it.  
Little thought*

### Decision influencers

- **Internal factors:** These are personal factors, such as education and self-perception.
- **External factors:** These are societal factors, such as social norms or geographic location.
- **Marketing:** These are the 4Ps — external factors aimed directly at product promotion.

*IWBAT analyze the role that cultural, social, and emotional influences have on financial behavior and analyze the impact of marketing, advertising, and sales strategies and techniques on purchasing decisions (e.g., impulse buying, delayed payment).*



### Marketing shortcomings

- Marketing research breaks people into groups and generalizes their reactions. This *often stereotypes demographics*, such as women, men, children, teenagers, and racial groups.
- Sometimes, marketing campaigns *divert you from your original intent* to purchase something. A really effective car campaign might convince you that you need a new car when you had only <sup>8</sup>intended to buy a used one.
- The placement of products can *prevent you from seeking out alternatives*. You might not know about a low-priced all-purpose soap because it is in the organic section rather than with the other soap.

IWBAT analyze the role that cultural, social, and emotional influences have on financial behavior and analyze the impact of marketing, advertising, and sales strategies and techniques on purchasing decisions (e.g., impulse buying, delayed payment).



Vocabulary: Appendix A.3 Key Terms

Practice: 5.3.2

Quiz 5.3.3

IWBAT analyze the role that cultural, social, and emotional influences have on financial behavior and analyze the impact of marketing, advertising, and sales strategies and techniques on purchasing decisions (e.g., impulse buying, delayed payment).

**Describe the four Ps of marketing in your own words.**

Product - an item or service you sell

Placement - location of product or store

Promotion - What you do to increase  
Sales (Advertising)

Price - What people pay for your  
Product or Service

## 5.4 Credit Cards

10/31/14

### What is a credit card?

Used to buy things

Debit card — you load the money

Credit card — you borrow the money

Visa

Am Ex

MC

Discover

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.



## 5.4 Credit Cards

10/31/14

interest - additional money you owe for borrowing the money (principal)

APR - Annual Percentage Rate - this is the rate of interest

minimum monthly payment - Smallest payment you can make on your debt: \$10 or 2% of balance whichever is greater

billing cycle - how long between bills  
usu. 15<sup>TH</sup> to 14<sup>TH</sup> of each month

grace period - a period of time when you don't have to pay

finance charge - fee

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated.

## 5.4 Credit Cards

10/31/14

According to the federal **Truth in Lending Act**, a bank is required to notify you of all charges associated with the credit card before you sign up. Below is an image of a Schumer box.

IMPORTANT CREDIT DISCLOSURES	
ANNUAL PERCENTAGE RATE (APR)	12.9%
Other APRs	Late Payment APR 24.9%† (see explanation below)
Minimum FINANCE CHARGE	\$1.00
Method of Computing the Balance	Average Daily Balance (Including New Purchases)
Grace Period for Repayment of the Balance	Not less than 25 days
Annual Fee	None
A Late Payment Fee of \$15.00 for balances less than \$50.00; \$25.00 for balances of \$50.00 but less than \$100.00; \$29.00 for balances of \$100.00 but less than \$1,000.00; and \$35.00 for balances \$1,000.00 and above per Account Type. You need not accept the credit card or pay any fee unless you use the card or have already used the Account. To find out about changes in the information in the table above, write us at P.O. Box 51, Mason, Oregon 40450.	

†If at any time you fail to pay the Minimum Payment Due by the Payment Due Date for two consecutive billing cycles or twice in any six month period, the APR will increase to 24.9%.

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated.

## 5.4 Credit Cards

10/31/14

Compound interest

$$fV = P\left(1 + \frac{r}{n}\right)^t$$

$$n = \begin{cases} \text{daily} = 365 \\ \text{monthly} = \frac{365}{30} \approx 12.167 \end{cases}$$

$$r = \frac{\text{APR}}{100}$$

$t$  = number of compounding periods

Effective interest rate [ I(eff) or APY]

$$\text{APY} = \left(1 + \frac{r}{n}\right)^n - 1$$

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated.



## 5.4 Credit Cards

10/31/14

Billing cycle - a month-long period during which interest is calculated and then billed

$$\text{periodic interest rate} = \frac{\text{APR}}{365} * \# \text{ of days in billing cycle}$$

grace period - a period of time during which no interest is charged on the card balance

Revolving Credit — use it, pay it off,  
use it again

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated.



## 5.4 Credit Cards

10/31/14

$$\begin{aligned} 1) \text{ APY} &= \left(1 + \frac{.1778}{365}\right)^{365} - 1 \\ &= .1945 \\ &\Rightarrow 19.45\% \end{aligned}$$

$$\text{APY} = \left(1 + \frac{r}{n}\right)^n - 1$$

Vocabulary: Appendix A.3 Key Terms

Practice: 5.4.2

Quiz 5.4.3

$$n_m = 12.167$$

$$n_d = 365$$

IWBAT understand how credit cards work and learn the language of credit, compute the APR and effective rate of a given credit card and understand how minimum payments are calculated.

## 5.5 Calculating Credit Card Interest

11/03/14

Explain these terms in your own words.

interest - a percentage of money you borrowed added to what you already owe

APR -

minimum monthly payment -

billing cycle -

grace period -

finance charge -

## 5.5 Calculating Credit Card Interest

11/03/14

IWBAT explore the average daily balance, previous balance, and adjusted balance methods and compare the various methods credit card companies use to calculate interest. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.5 Calculating Credit Card Interest

11/03/14

**Effective interest rate:** *APY*

$$\left(1 + \frac{r}{n}\right)^n - 1$$

$$\left(1 + \frac{.129}{365}\right)^{365} - 1$$

*.1377*

**Periodic interest rate:**

$$\left(\frac{r}{365}\right) \times \text{\#days in billing cycle}$$

### IMPORTANT CREDIT DISCLOSURES

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## 5.5 Calculating Credit Card Interest

11/03/14

### **average daily balance method**

The average daily balance is calculated by adding each day's balance and dividing that total by the number of days in the billing cycle. This is multiplied by the periodic interest rate.

### **previous balance method**

Interest is calculated based on the outstanding balance at the end of the previous billing period. *New charges* in the current billing period are *not* part of the interest calculation. This is multiplied by the periodic interest rate.

### **adjusted balance method**

Interest is added based on the account balance remaining after applying all payments and credits during the billing period. *New charges* in the current billing period are *not* part of the interest calculation. This is multiplied by the periodic interest rate.

IWBAT explore the average daily balance, previous balance, and adjusted balance methods and compare the various methods credit card companies use to calculate interest.

## 5.5 Calculating Credit Card Interest

11/03/14

The opening balance of one of Herb's 30-day billing cycles for his credit card was \$1220, and it remained that amount for the first 10 days of his billing cycle. He then made a purchase for \$470, so his balance jumped to \$1690, and it remained that amount for the next 10 days. Herb then made a payment of \$350, so his balance for the last 10 days of the billing cycle was \$1340. The APR of Herb's credit card is 33%.

1. What was Herb's average balance for the month?

$$\begin{array}{r} \$1220 \times 10 \\ 1690 \times 10 \\ + 1340 \times 10 \\ \hline 42,500 \end{array} \quad / 30$$

2. What is his periodic interest rate?

$$\frac{.33}{365} \times 30$$
$$\boxed{.0271}$$

3. If Herb's credit card uses the average daily balance method, how much was Herb charged in interest for the billing cycle?

$$\$38.39$$

4. If Herb's credit card uses the previous balance method, how much was Herb charged in interest for the billing cycle?

$$\begin{array}{r} \$1220 \\ \times .0271 \\ \hline \$33.06 \end{array}$$

5. If Herb's credit card uses the adjusted balance method, how much was Herb charged in interest for the billing cycle?

$$\begin{array}{r} \$1220 \\ - 350 \\ \hline \$870 \end{array} \times .0271 = \$23.57$$

IWBAT explore the average daily balance, previous balance, and adjusted balance methods and compare the various methods credit card companies use to calculate interest.

## 5.5 Calculating Credit Card Interest

11/03/14

Vocabulary: Appendix A.3 Key Terms

Practice: 5.5.2

Quiz 5.5.3

IWBAT explore the average daily balance, previous balance, and adjusted balance methods and compare the various methods credit card companies use to calculate interest.



## 5.6 Tracking Payments & Purchases

11/04/14

**Explain the differences between average daily balance, previous balance, and adjusted balance methods of calculating credit card interest.**

Previous balance:  $\text{Previous balance} \cdot \text{periodic interest rate}$

Adjusted balance:  $(\text{Previous balance} - \text{Payments} - \text{Credits}) \cdot \text{periodic interest rate}$

Average Daily Balance:

$$\frac{\sum_{d=1}^n \text{balance}_d}{n} \cdot \text{periodic interest rate}$$



## 5.6 Tracking Payments & Purchases

11/04/14

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.6 Tracking Payments & Purchases

11/04/14

**Calculate how much you will end up paying if you only make minimum payments.**

You make a New Year's resolution to get in shape so you purchase a nice tread climber on sale for \$1200. You put it on your credit card. How long will it take for you to pay it off using the minimum payment of \$10 or 2% of the balance, whichever is higher?

$$\frac{\$1200}{\$24/\text{mo}} = 50 \text{ mo.}$$

Your card has an APR of 12%. How long will it now take you to pay off the purchase?

$$117 \text{ mo.}$$

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.



## 5.6 Tracking Payments & Purchases

11/04/14

It will take you 66 months to be rid of your debt. In that time, you will pay \$443.00 in interest.

If you paid the minimum payment every month, it would take you 117 months, to pay off your debt and you would pay \$744.97.

Month	Fixed Payment	Interest Paid	Principal Paid	Remaining Balance
1	\$25.00	\$12.00	\$13.00	\$1187.00
2	\$25.00	\$11.87	\$13.13	\$1173.87
3	\$25.00	\$11.74	\$13.26	\$1160.61
4	\$25.00	\$11.61	\$13.39	\$1147.21
5	\$25.00	\$11.47	\$13.53	\$1133.69
6	\$25.00	\$11.34	\$13.66	\$1120.02
7	\$25.00	\$11.20	\$13.80	\$1106.22
8	\$25.00	\$11.06	\$13.94	\$1092.29
9	\$25.00	\$10.92	\$14.08	\$1078.21
10	\$25.00	\$10.78	\$14.22	\$1063.99
11	\$25.00	\$10.64	\$14.36	\$1049.63
12	\$25.00	\$10.50	\$14.50	\$1035.13
13	\$25.00	\$10.35	\$14.65	\$1020.48
14	\$25.00	\$10.20	\$14.80	\$1005.68
15	\$25.00	\$10.06	\$14.94	\$990.74
16	\$25.00	\$9.91	\$15.09	\$975.65
17	\$25.00	\$9.76	\$15.24	\$960.40
18	\$25.00	\$9.60	\$15.40	\$945.01
19	\$25.00	\$9.45	\$15.55	\$929.46
20	\$25.00	\$9.29	\$15.71	\$913.75
21	\$25.00	\$9.14	\$15.86	\$897.89
22	\$25.00	\$8.98	\$16.02	\$881.87
23	\$25.00	\$8.82	\$16.18	\$865.69
24	\$25.00	\$8.66	\$16.34	\$849.34

25	\$25.00	\$8.49	\$16.51	\$832.84
26	\$25.00	\$8.33	\$16.67	\$816.17
27	\$25.00	\$8.16	\$16.84	\$799.33
28	\$25.00	\$7.99	\$17.01	\$782.32
29	\$25.00	\$7.82	\$17.18	\$765.14
30	\$25.00	\$7.65	\$17.35	\$747.80
31	\$25.00	\$7.48	\$17.52	\$730.27
32	\$25.00	\$7.30	\$17.70	\$712.58
33	\$25.00	\$7.13	\$17.87	\$694.70
34	\$25.00	\$6.95	\$18.05	\$676.65
35	\$25.00	\$6.77	\$18.23	\$658.42
36	\$25.00	\$6.58	\$18.42	\$640.00
37	\$25.00	\$6.40	\$18.60	\$621.40
38	\$25.00	\$6.21	\$18.79	\$602.61
39	\$25.00	\$6.03	\$18.97	\$583.64
40	\$25.00	\$5.84	\$19.16	\$564.48
41	\$25.00	\$5.64	\$19.36	\$545.12
42	\$25.00	\$5.45	\$19.55	\$525.57
43	\$25.00	\$5.26	\$19.74	\$505.83
44	\$25.00	\$5.06	\$19.94	\$485.89
45	\$25.00	\$4.86	\$20.14	\$465.75
46	\$25.00	\$4.66	\$20.34	\$445.40
47	\$25.00	\$4.45	\$20.55	\$424.86
48	\$25.00	\$4.25	\$20.75	\$404.11
49	\$25.00	\$4.04	\$20.96	\$383.15
50	\$25.00	\$3.83	\$21.17	\$361.98
51	\$25.00	\$3.62	\$21.38	\$340.60
52	\$25.00	\$3.41	\$21.59	\$319.00
53	\$25.00	\$3.19	\$21.81	\$297.19

54	\$25.00	\$2.97	\$22.03	\$275.17
55	\$25.00	\$2.75	\$22.25	\$252.92
56	\$25.00	\$2.53	\$22.47	\$230.45
57	\$25.00	\$2.30	\$22.70	\$207.75
58	\$25.00	\$2.08	\$22.92	\$184.83
59	\$25.00	\$1.85	\$23.15	\$161.68
60	\$25.00	\$1.62	\$23.38	\$138.29
61	\$25.00	\$1.38	\$23.62	\$114.68
62	\$25.00	\$1.15	\$23.85	\$90.82
63	\$25.00	\$0.91	\$24.09	\$66.73
64	\$25.00	\$0.67	\$24.33	\$42.40
65	\$25.00	\$0.42	\$24.58	\$17.82
66	\$18.00	\$0.18	\$17.82	\$0.00

How can you avoid paying for so long and paying so much interest?

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.

## 5.6 Tracking Payments & Purchases

11/04/14

Minimum payment plus new purchases

Month 1: New TV \$1300

APR: 18%

Month 4: Microwave \$45

Minimum payment:

Month 5: Stroller \$150

2% of previous balance

Month 6: Clothes \$250

Interest calculated:

Previous Balance

End of month	Previous balance	New charges	Payment received	Finance charge	Principal paid	New balance
1	0	1300	0	0	0	1300
2	1300	0	26	19.50	6.50	1293.50
3	1293.50	0	25.87	19.40	6.47	1287.03
4	1287.03	45	25.74	19.31	6.43	1325.60
5	1325.60	150	26.51	19.88	6.63	1468.97
6	1468.97	250	29.38	22.03	7.34	1711.63
7	1711.63	0	34.23	25.67	8.56	1703.07

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.



## 5.6 Tracking Payments & Purchases

11/04/14

Same scenario, but payments raised to \$200.

End of month	Previous balance	New charges	Payment received	Finance charge	Principal paid	New balance
1	0	1300	0	0	0	1300
2	1300	0	200	19.50	180.50	1119.50
3	1119.50	0	200	16.79	183.30	936.20
4	936.20	45	200	14.03	185.97	795.23
5	795.23	150	200	11.93	188.07	757.16
6	757.16	250	200	11.35	188.64	818.52
7	818.52	0	200	12.28	187.72	630.80

Same scenario, but previous balance paid off monthly.

End of month	Previous balance	New charges	Payment received	Finance charge	Principal paid	New balance
1	0	1300	1300	0	1300	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	45	45	0	45	0
5	0	150	150	0	150	0
6	0	250	250	0	250	0
7	0	0	0	0	0	0

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.

## 5.6 Tracking Payments & Purchases

11/04/14

### Credit Card Accountability, Responsibility, and Disclosure Act of 2009

- Card companies must give cardholders 45 days' notice of any interest rate increases.
- Creditors must print an explanation on their statements showing how long it would take to pay the total balance due and how much interest would be paid if the debtor only makes the minimum monthly payment.

**Payment Due Date**  
04/01/2010

**APR = 17%**      Minimum payment = 2% of balance or \$15, whichever is larger      New Balance \$ **9999.00**      Minimum Amount Due \$ **199.98**

**Late Payment Warning:** If we do not receive your Minimum Amount Due by the Payment Due Date listed above, you will have to pay a late fee of up to \$39.

**Minimum Payment Warning:** If you make only the minimum payment each period, you will pay more in interest and it will take you longer to pay off your balance. For example:

If you make no additional charges and each month you pay . . .	You will pay off the balance shown on this statement in about . . .	And you will pay an estimated total of. . .
Only the minimum amount due	28.33 years	\$23,605.35
\$300	3.83 years	\$13,627.83 (savings = \$9977.52)

If you would like information about credit counseling services, call 1-866-391-5446.

Credit card companies are now required to give information on each statement concerning minimum payments.

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.

## 5.6 Tracking Payments & Purchases

11/04/14

Vocabulary: Appendix A.3 Key Terms

Practice: 5.6.2

Quiz 5.6.3

IWBAT make a table that shows the effects of making payments and additional purchases on the balance and explore various scenarios to pay off a credit card to see which is most beneficial.



## 5.7 Comparing Credit Cards

11/05/14

**Calculate how much you will end up paying if you only make minimum payments.**

You owe \$1343 on your credit card. Minimum payment is 2% of the balance. The APR is 16% compounded via the average daily balance method. You can afford to pay up to \$50 per month toward the card.

If you only make the minimum payment each month, how long will it take you to pay off the balance and how much will you have paid when the balance is \$0?

17 / months    \$1680.40 int.  
\$3023.40 total

If you pay the maximum you can afford each month, how much time and money will you save?

34 mo    You Save 137 mo (11 yr 5 mo)  
\$330.79 int    \$1349.61  
\$1673.79 tot



## 5.7 Comparing Credit Cards

11/05/14

**Compare the advantages and disadvantages of using cash instead of a credit card.**

Cash	Credit
No fees or charges	Sometimes have rewards
No identity theft	Good record keeping
No debt	Convenient online bill payment
You can't buy anything you can't pay for	May have protection when stolen

## 5.7 Comparing Credit Cards

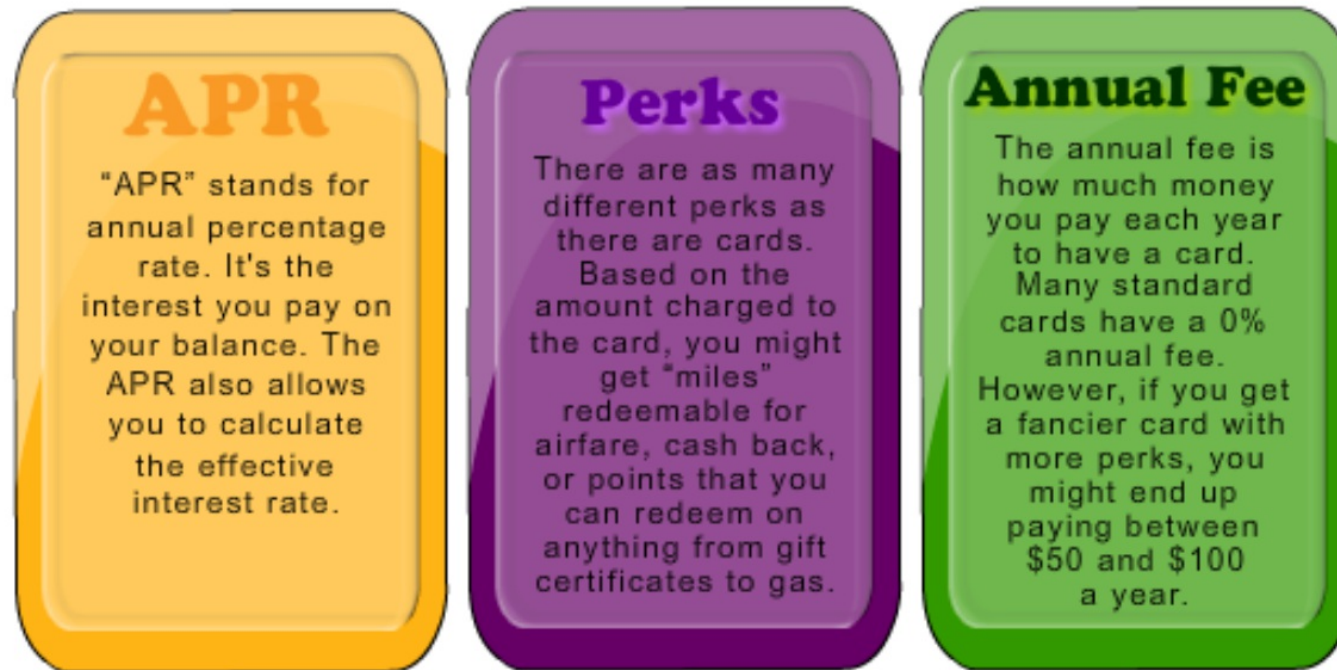
11/05/14

IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.7 Comparing Credit Cards

11/05/14

### Credit card features/enticements



IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies.

## 5.7 Comparing Credit Cards

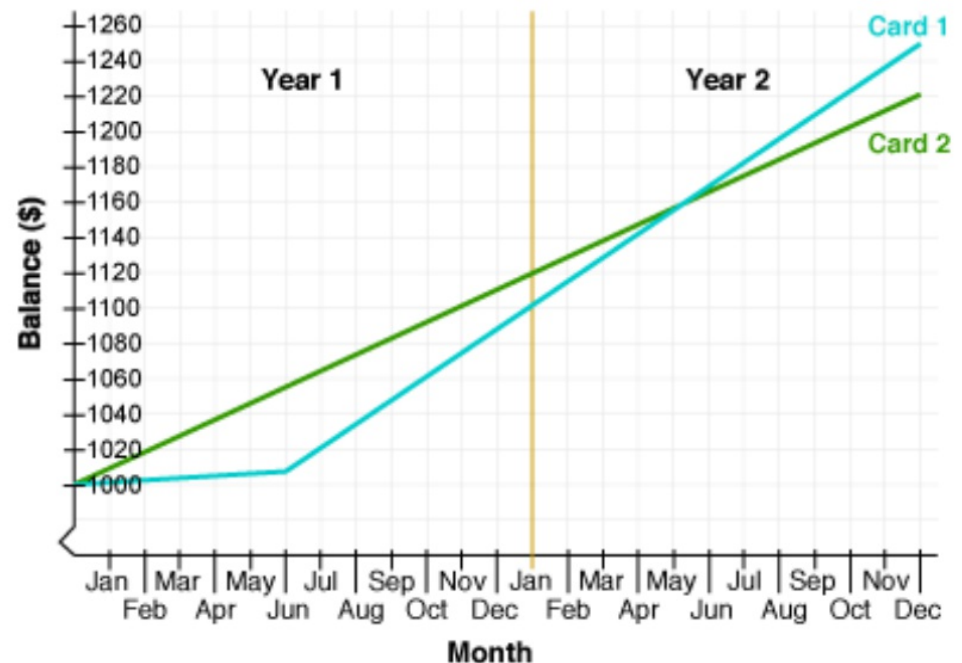
11/05/14

### APR

introductory APR - *interest rate when you first open your credit account - 6-12 mo*

standard APR - *your interest rate after the intro. rate expires - 10-20%*

The graph illustrates the difference between card 1, which has a 9.9% APR, and card 2, which had an introductory APR of 1.9%, but now has a rate of 14.24%.



IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies.



## 5.7 Comparing Credit Cards

11/05/14

### Perks

balance transfer

No penalty for a missed payment

Cash back

airline miles

points

### Student Cards

If you are a college student, you are eligible for a student card from almost any bank. The major advantage of a student card is that it requires no credit history. Many banks offer other perks, including:

- points for high GPA;
- 0% APR for the first 6 to 12 months;
- no annual fee;
- points earned from purchases that can be redeemed at select restaurants or stores;
- discounts on purchases made through select retailers.

IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies.

## 5.7 Comparing Credit Cards

11/05/14

Annual fee — yearly payment to use the card

Suppose you want to compare two cards. Card 1 has an APR of 6.9% and an annual fee of \$35, while card 2 has a standard APR of 9.9% and no annual fee.

Which card is better?  $fv = P * APR + \text{fee}$

$$1) fv = P \left(1 + \frac{0.069}{12}\right)^{12} + 35 \quad P < \$1080.46$$

Card 2

$$2) fv = P \left(1 + \frac{0.099}{12}\right)^{12} + 0 \quad P > \$1080.46$$

Card 1

$$P \left(1 + \frac{0.069}{12}\right)^{12} + 35 = P \left(1 + \frac{0.099}{12}\right)^{12}$$
$$\frac{35}{[\quad]} = P \left[ \frac{\left(1 + \frac{0.099}{12}\right)^{12} - \left(1 + \frac{0.069}{12}\right)^{12}}{[\quad]} \right]$$
$$P = \$1080.46$$

IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies.

## 5.7 Comparing Credit Cards

11/05/14

<http://mikemelosh.wikispaces.com/Class+Notes>

Vocabulary: Appendix A.3 Key Terms

Practice: 5.7.2

Quiz 5.7.3

IWBAT compare cards with an annual fee and a lower APR to ones with no fee and a higher APR or an introductory APR and explore common perks offered by credit card companies.



## 5.8 Credit Scores

11/06/14

**Discuss with a partner the advantages and disadvantages of using cash or a credit card.**

Please use language such as this to support your claims:

- With \_\_\_\_\_ you can \_\_\_\_\_, but \_\_\_\_\_.
- One advantage of \_\_\_\_\_ is \_\_\_\_\_, because \_\_\_\_\_.
- One disadvantage of \_\_\_\_\_ is \_\_\_\_\_, because \_\_\_\_\_.

**You will be responsible for telling the class one thing your partner said to you.**



### Would you loan your friend money?

#### More Likely To Say Yes If Your Friend . . .

Has a stable job

Agrees to give you a ring worth \$3000

Has borrowed money and paid you back before

Owns stocks worth \$20,000

#### More Likely To Say No If Your Friend . . .

Owes several other people money

Is unemployed

Has borrowed money before and failed to repay you

## 5.8 Credit Scores

11/06/14

The three Cs of credit

Capacity – *ability to pay the loan back*

Has a stable job

Is unemployed

Owes several other people money

Character – *likelihood of paying back the loan*

Has borrowed money and paid you back before

Has borrowed money before and failed to repay you

Collateral – *items with monetary value that are used for a loan (secure)*

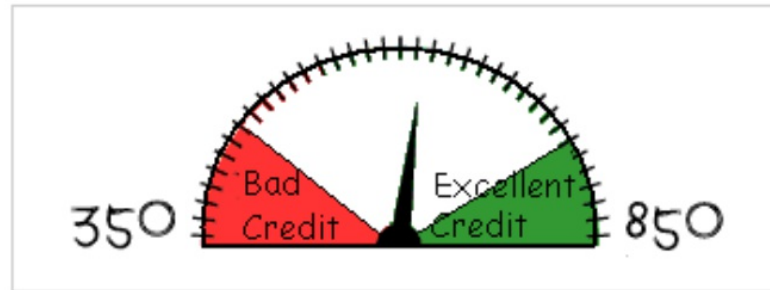
Agrees to give you a ring worth \$3000

Owens stocks worth \$20,000

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.8 Credit Scores

11/06/14



FICO is a company founded in 1956 that evaluates credit risk. A credit score provided by FICO is the *most used score in the world*, so people often refer to a credit score as a FICO score. (There are, however, several companies that evaluate credit scores.)

The FICO method of calculating credit scores involves five different factors. Below is a rough sketch of how each factor could play into a person's credit score. Note: FICO's actual algorithms are not public information, so the table below is hypothetical.

Factor	Percentage that it affects score	Max number of points awarded
Payment history	35%	297.5
Amount owed	30%	255
Length of credit history	15%	127.5
New credit	10%	85
Types of credit	10%	85

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.



## 5.8 Credit Scores

11/06/14

What damages credit scores?

Credit event	FICO score damage to a starting score of 780
Apply for a store credit card	-10 points
Take on a new \$30,000 car loan	-15 points
Take on a new mortgage loan of \$350,000	-15 points
Miss a payment on one account that wasn't already late	-45 to -75 points
Miss the payment on all of your accounts one month	-60 to -110 points
Max out all of your credit cards (utilization percentage is now 100%)	-50 to -100 points
File for bankruptcy	-195 to -255 points

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.

## 5.8 Credit Scores

11/06/14

### How Credit Scores Improve

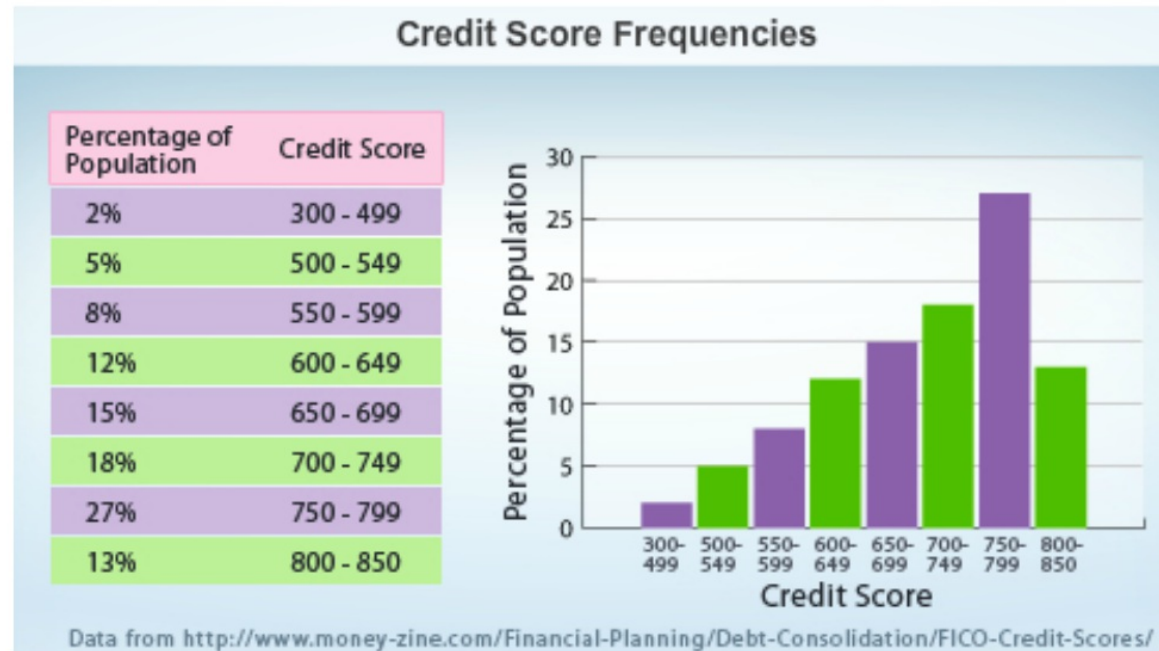
- **Make all your payments on time.** This means you should never be late paying off mortgages, student loans, or credit cards.
- **Open accounts, take loans, and use credit cards** — *if you can do so responsibly*. Credit scores are based on your history of financial stability and repaying your loans. The more history there is, the better your score.
- **Avoid maxing out credit cards**, even if you are able to pay off the debt.
- **Do not apply for too many credit cards or loans** *at the same time.*

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.

## 5.8 Credit Scores

11/06/14

A **credit rating** is an estimate of a person's ability to pay off debts. How many people really have excellent credit or terrible credit?



If your FICO credit score is

750 - 850  
660 - 749  
620 - 659  
350 - 619

Your credit rating is considered to be

Excellent  
Good  
Fair  
Poor

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.



## 5.8 Credit Scores

11/06/14

This table is only a hypothetical credit-scoring table. Real credit scoring is performed by companies that use proprietary algorithms. This is why you must pay a fee to have your credit score checked online.

Age	Under 25	25-29	30-34	35-39	40-44	45-49	50 or over
	48	20	0	4	72	88	124
Time at address	< 1 yr	1 yr	2-3 yrs	4-5 yrs	6-9 yrs	10+ yrs	
	36	0	20	0	20	48	
Age of auto	none	0-1 yrs	2 yrs	3-4 yrs	5-7 yrs	8+ yrs	
	0	48	64	52	12	0	
Car payment	None	< \$125	\$126-\$150	\$151-\$199	\$200+		
	72	24	4	16	0		
Housing costs	< \$274	\$275-\$399	\$400+	Owns clear	Lives w/ relatives		
	0	40	48	48	96		
Checking and savings accounts	Both	Checking only	Savings only	Neither			
	60	8	8	0			
Finance company reference	Yes	No					
	0	60					
Major credit cards	None	1	2 or more				
	0	20	60				
Ratio of debt income	No debts	1% - 5%	6% - 15%	16% over			
	164	64	80	0			
Declared bankruptcy	Never	In the last 10 yrs	Over 10 yrs ago				
	102	0	24				

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.




## 5.8 Credit Scores

11/06/14

Why are credit scores important?

### **Credit cards**

When you apply for a credit card, oftentimes the APR that is advertised will not be the APR you actually get. This is because somewhere in the small print it says the low APR depends on your credit score.

 Play


### **Interest rates on loans**

The interest rate of a loan is often determined by your credit score. When you decide to buy a home or a car, you will probably need a loan. With a high credit score, lenders are willing to loan you money at a low rate. With a low credit score, you may find it very expensive, or even impossible, to borrow money.

 Play


### **Car insurance**

When you purchase car insurance, the higher your credit score, the lower your rates will be.

 Play

### **Rental applications**

If you apply to rent an apartment, landlords often check your credit score before agreeing to rent to you.

 Play

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.

## 5.8 Credit Scores

11/06/14

### Mortgage rate example

FICO score	Interest rate	Monthly payment
720 – 850	5.59%	\$860
700 – 719	5.71%	\$872
675 – 699	6.25%	\$924
620 – 674	7.40%	\$1039
560 – 619	8.53%	\$1157
500 – 559	9.29%	\$1238

Vocabulary: Appendix A.3 Key Terms

Practice: 5.8.2

Quiz 5.8.3

IWBAT understand how to improve your credit score and use a hypothetical credit score table to calculate a credit score.

**What factors are used to compute a credit score?**

Character - likelihood of paying back the loan,  
history

Capacity - ability to pay the loan back

Collateral - items with monetary value  
you can use to secure a loan

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.



## 5.9 Bankruptcy

11/07/14

### What is bankruptcy?

Hurts your credit score  
a lot.

have debt you can't pay  
 $\text{Spending} > \text{income}$

Bill collectors have to stop  
calling.

assets can be sold  
(liquidated)

pay off debts

difficulty getting loans

people or businesses

#### CHAPTER 7

Play

is sometimes called "straight" bankruptcy or liquidation. In this case, all of the nonessential assets an individual owns are sold to immediately pay off debt to the creditors. Chapter 7 is available only to individuals.

#### CHAPTER 13

Play

is available to individuals or business owners and involves a more complicated pay-off plan. Businesses are turned over to a trustee, who will reorganize the company's assets and oversee debt repayment. Individuals must reorganize their debts as well and make payments over a certain period of time.

#### CHAPTER 11

Play

is available to all businesses but is usually used by corporations (multiowner businesses). It effectively puts a stay on creditors while allowing the company to reorganize. It is possible that the company will continue running or be sold while it is bankrupt and does not necessarily mean the company will go out of business.

IWBAT understand how bankruptcy works and  
see how bankruptcy affects your credit score.

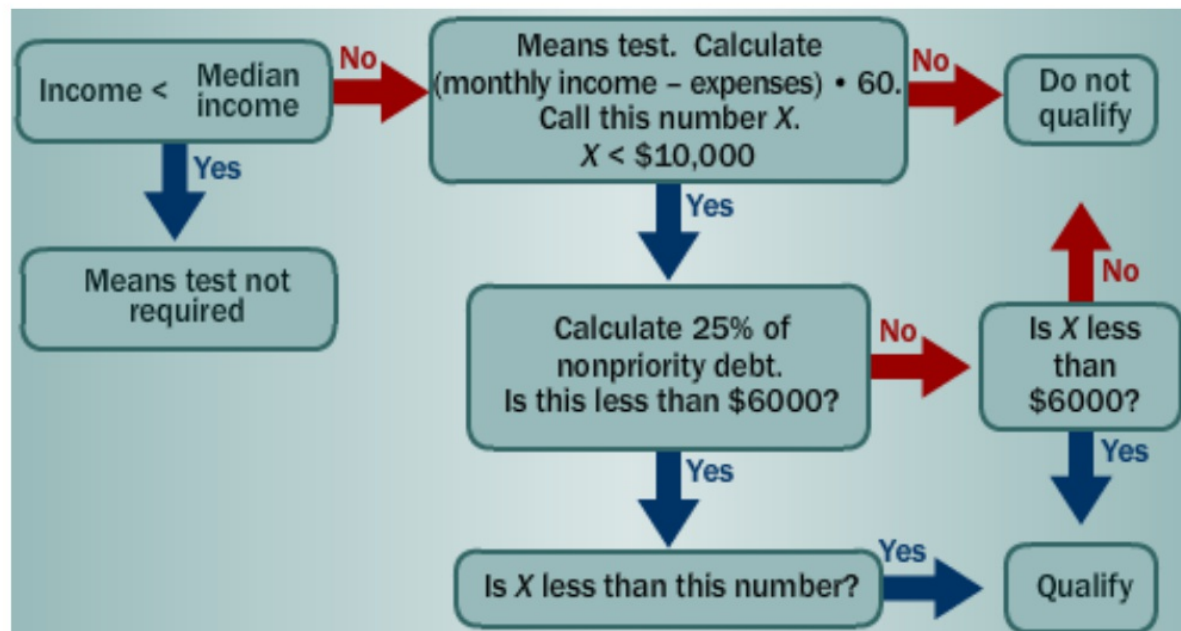
## 5.9 Bankruptcy

11/07/14

### Chapter 7 means test

To prevent bankruptcy *fraud*, the government has established a means test for Chapter 7 filers. This prevents people from filing if they could actually pay off their debts. The means test does not apply to anyone who makes less than the median income in his or her home state.

Colorado  
(2013)  
\$58,823  
source: AP



IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.

## 5.9 Bankruptcy

11/07/14

### Chapter 7 cont'd

- Potential filers for bankruptcy must receive credit counseling from a federally approved agency.
- Correct forms must be filled out.
- State courts determine the specific terms of the bankruptcy including
- liquidated assets.

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.



## 5.9 Bankruptcy

11/07/14

### Chapters 11 & 13

- Chapters 11 and 13 require that a trustee be appointed to oversee reorganization of individual or company assets.
- They also require that a debt repayment plan for a certain time period (usually 3 – 5 years) be drawn out and put into place.

Under these chapters, it is possible for a business declaring bankruptcy to stay open.

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.



## 5.9 Bankruptcy

Discharging debt

pay off your debt

11/07/14

Debt not forgiven	
Chapter 7	<ul style="list-style-type: none"><li>• Alimony</li><li>• Child support</li><li>• Most recent back taxes</li><li>• Student loans</li><li>• Purchases of luxury goods or services costing more than \$550 that were bought within 90 days of filing</li><li>• Cash advances totaling more than \$825 that were made within 70 days of filing</li><li>• Fines or penalties to government agencies relating to tax or to an event or transaction that occurred 3 years before the filing</li><li>• Debts obtained through false pretenses, false statements, or fraud</li></ul>
Chapter 13	<p>Same as Chapter 7</p>
Chapter 11	<ul style="list-style-type: none"><li>• Most recent back taxes</li><li>• Cash advances totaling more than \$825 that were made within 70 days of filing</li><li>• Fines or penalties to government agencies relating to tax or to an event or transaction that occurred 3 years before the filing</li><li>• Debts obtained through false pretenses, false statements, or fraud</li></ul>

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.

## 5.9 Bankruptcy

11/07/14

### Bankruptcy and your credit report

	Chapter 7	Chapter 13	Chapter 11
Years until removed from credit report	10 years	Up to 10 years	Never
Time to pay off debt	Immediately	3 – 5 years	Indefinitely

People who have gone bankrupt find it very difficult to get new loans or credit cards.

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.

## 5.9 Bankruptcy

11/07/14

### Credit Overload Rule

The credit overload rule is that no more than 20% of take-home pay should go toward paying off credit cards and loans. You can calculate this as a ratio.

$$\frac{\text{Monthly payment on loans and credit cards}}{\text{Monthly take-home pay}}$$

If this number is less than 0.2 (the decimal equivalent of 20%), then you are not in danger of credit overload. If it is larger, then it is time to reorganize your budget.

A mortgage (a loan on a house) is the only type of debt that is an *exception* to the credit overload rule of thumb. In general, it is fine to pay 25%, or about a week's pay, of your income toward a mortgage (or toward rent).

So, you may subtract mortgage or rent from total loans and apply the credit overload rule to the remaining debt.

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.

Vocabulary: Appendix A.3 Key Terms

Practice: 5.9.2

Quiz 5.9.3

IWBAT understand how bankruptcy works and see how bankruptcy affects your credit score.



**What are the three kinds of bankruptcy  
and who qualifies for each?**

Chapter 7  
people only

Chapter 13  
people + business  
owners

Chapter 11  
businesses only

If household income  
is above the median  
income for your state,  
you must pass the  
means test.

IWBAT demonstrate my readiness for the unit test on practice problems. I will capture my thinking using the math note catcher including teacher and student-team modeled example problems on the Promethean board. I will demonstrate my understanding on my exit ticket.

## 5.10 Wrap-up

11/12/14

Practice: 5.10.2

$$1) \$135 + (135 - 40)(0.06) = \$$$

IWBAT demonstrate my readiness for  
the unit test on practice problems.

## 5.10 Wrap-up

11/12/14

Practice: 5.10.2

IWBAT demonstrate my readiness for  
the unit test on practice problems.



Test 5.10.3 (CST) or 5.10.4 (TST)

IWBAT demonstrate my readiness for  
the unit test on practice problems.

**Describe the three types of retail cost reductions and how each works with relation to sales taxes.**

Coupon - pay taxes on full price then coupon is taken off

rebate - pay taxes on the full price then the manufacturer sends money to the customer

Sale/discount - discount taken first then you pay taxes on the reduced price

IWBAT demonstrate my readiness for the unit test on practice problems.

## 5.10 Wrap-up

11/13/14

Practice: 5.10.2

IWBAT demonstrate my readiness for  
the unit test on practice problems.

## 5.10 Wrap-up

11/13/14

Practice: 5.10.2

IWBAT demonstrate my readiness for  
the unit test on practice problems.



Test 5.10.3 (CST) or 5.10.4 (TST)

IWBAT demonstrate my readiness for  
the unit test on practice problems.

Complete  
Test 5.10.3 (CST) or 5.10.4 (TST)

IWBAT demonstrate my readiness for  
the unit test on practice problems.